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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/762,858	01/21/2004	Gary A. Frazier	004578.1371	5929

7590 08/23/2005  
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EXAMINER

TON, MY TRANG

ART UNIT	PAPER NUMBER
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2816

DATE MAILED: 08/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/762,858

Applicant(s)

FRAZIER, GARY A.

Examiner

My-Trang N. Ton

Art Unit

2816

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 09 June 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

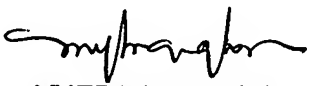
## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

  
MY-TRANG N. TON  
PRIMARY EXAMINER

## Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

***Claim Objections***

Claims 6 and 10-11 remain objected to because of the following informalities:

In claim 6, line 1, it is suggested that before "including", -- wherein said second portion -- should be added.

In claim 10, line 1, it is suggested that before "including", -- wherein said second portion -- should be added.

In claim 11, line 1, it is suggested that before "including", -- wherein said second portion -- should be added.

\*\*\* The limitations recited in claims 6 and 10-11 are seen to be a part of the second portion.

Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

Claims 1-2, 4-5, 12-18 and 20-21 remain rejected under 35 U.S.C. 102(b) as being anticipated by Frazier et al (U.S Patent No. 6,359,520) for the reasons recited in the last Office action.

***Claim Rejections - 35 USC § 103***

Claims 3, 6-11 and 19 remain rejected under 35 U.S.C. 103(a) as being unpatentable over Frazier as applied to claim 1 above in view of Tang (U.S Patent No. 5,930,323) for the reasons recited in the last Office action.

***Response to Arguments***

Applicant's arguments filed 6/9/05 have been fully considered but they are not persuasive. Examiner has thoroughly reviewed Applicant's arguments but firmly believes that the cited reference reasonably and properly meet the claimed limitation as rejected.

Applicant's argument – Frazier provides no disclosure of the claimed complex conjugate reactance, thus could not include the claimed reactance that substantially cancels the reactance of the resonant tunneling device.

Examiner's response -- the Frazier reference clearly states in col. 6, lines 6-11: **"the impedance of the slot is the complex conjugate** of the impedance of the set 77. In this manner, the effective reactance of the set 77 **will be cancelled by the conjugate reactance** of the slot" and col. 6, lines 28-34 also states: **"the impedance of the dipole is the complex conjugate** of the impedance of the set 81. In this manner, **the effective reactance of the set 81 will be cancelled by the conjugate reactance of the dipole"**, thus, the limitation recited in claim 1 "a second portion ... so that at said selected frequency said **complex conjugate reactance substantially cancels said reactance of said resonant tunneling device**" is met.

Applicant's argument -- regarding the limitations recited in claims 6-7.

Examiner's response -- Per (a blocking capacitor of claim 6 and the transmission line of claim 7), these appear to be obvious variations (i.e., not patentably distinct) to (for example: inductor of claim 5). Therefore, it would have been obvious to one of ordinary skill in the art to employ (the blocking capacitor or the transmission line) as

Art Unit: 2816

they appear to be obvious variations (not patentably distinct) and yielding same functional device.

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., two different modes of operation: narrowband mode and wideband mode) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to My-Trang N. Ton whose telephone number is 571-272-1754. The examiner can normally be reached on 7:00 a.m - 5:30 p.m.

Art Unit: 2816

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Callahan can be reached on 571-272-1740. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



My-Trang N. Ton  
Primary Examiner  
Art Unit 2816

August 22, 2005

1.